

// //

Please cancel claims 6 and 10.

Please add claim 11.

- BB*
Subjct
11. The emulsion according to claim 1 wherein the condensation products of polyglycols and amines is polyquaternium 10.

CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time, Applicants respectfully request that this be considered a petition therefor. The Assistant Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

REMARKS

Comments About Amendment

Claims 1 has been amended, claims 6 and 10 have been cancelled and claim 11 has been added. It is believed that no new matter has been added. Claims 1-5, 7-9 and 11 would be pending upon entry of the amendment.

Claim 1 has been amended to correct minor typographical errors not previously discovered and introduces the limitation of claim 6 into (c).

Claim 11 recites a specific compound (polyquaternium 10) of one of the embodiments in the Markush group which was previously considered (i.e. condensation products of polyglycols and amines) - see also attachment for structure of polyquaternium 10 and Examples 2, 4 and 5 in the

specification for support for this compound).

At the outset, Applicants wish to address the showing under 37 CFR § 1.116(a) regarding why the amendments above are necessary and were not presented earlier. According to MPEP 714.13 (Amendments After Final Rejection or Action, Procedure Followed - Action by Examiner), there are four grounds (cited as (A)-(D)) upon which the examiner may elect not to enter the applicants amendment. Each ground is addressed below:

- (A) The claims as amended represent a narrower embodiment of the applicants originally claimed invention (applicants reserve the right to pursue broader scope of the original claims in continuing application) and as such it is believed that the amended claims are now in condition for allowance or at the very least simplifies the issues for appeal.
- (B) It is believed that no new matter has been entered.
- (C) The amended claims represent a narrower embodiment of the applicants invention as claimed prior to the issuance of the examiner's final rejection and as such no new issues are raised which require further consideration or search.
- (D) The amendment does not present any additional claims with subject matter which has not previously been considered and does not present any additional claims in excess of those being cancelled.

In view of the foregoing, Applicants respectfully request that the Examiner enter and consider the amendments above.

35 U.S.C. 103(a) rejection

Claims 1-10 were rejected by the examiner as being obvious over Schreiber et al. (WO 98/17232) in view of Lang et al. (U.S. Patent 4,976,952) in further view of Seidel et al. (U.S. Patent 5,830,483). The applicants request reconsideration for the claims as amended.

The examiner maintains her position with regard to Schreiber et al. because of the applicants' use of the open ended term "comprising". While the use of the term "comprising" does allow for the inclusion of other ingredients, even possibly in large amounts, this does not excuse the examiner for making a consideration of the applicants invention as a whole (MPEP 2141.02), i.e. the applicants' invention is directed toward a W/O emulsion ("a stable mixture of two or more immiscible liquids held in suspension by small percentages of substances called emulsifiers" - see page 460 from Hawley's Condensed Chemical Dictionary attached to this response) whereas the invention of Schreiber is directed toward cosmetic and skin care sticks (i.e. solid products).

As such, Schreiber et al. not only differs from the applicants claimed invention by failing to teach cationic polymers (as previously acknowledged by the examiner) but also in the physical form of the compositions (i.e. liquid vs. solid). Moreover, Schreiber et al. requires that their lipid phase contain "at least one paraffin component" (a solid form of a lipid) which would represent a teaching away from the applicants invention (MPEP 2141.03) even if Schreiber et al. had contemplated W/O emulsions; there is no contravening evidence in Schreiber et al. which suggests that W/O emulsions were contemplated or that one of ordinary skill in the art would have been motivated to add a solid component to the applicants claimed emulsions.

Lang et al. only addresses the deficiencies of the Schreiber et al. reference with regard to the teaching of cationic polymers which are N-substituted chitosans having formula (I) - see Abstract - alone or in combination with other surfactants. The cancellation of the reference to cationic chitin/chitosan polymers in claims 1 renders the arguments for or against the use of Lang et al. in

combination with Schreiber et al. for the use of cationic polymers moot.

Seidel et al. also does not remedy the deficiencies of the Schreiber et al. reference and actually represents an even further teaching away from the applicants' invention that Schreiber et al. Note that Seidel et al. is an *oil-in-water* (O/W) emulsion whereas the applicants claimed invention is a *water-in-oil* (W/O) emulsion. Both references have an overlapping range of water (80-99%) and oil (1 to about 20%) phase; i.e. it is the addition of the other ingredients which determines whether the emulsion will be O/W or W/O as the emulsions of Seidel et al. cannot simultaneously have both properties. Therefore, the selection of specific ingredient from the teachings of Seidel et al. is out of context with the applicants invention (see also MPEP 2143.01 - "The proposed modification cannot render the prior art unsatisfactory for its intended purpose" and MPEP 2143.02 - "Reasonable expectation of success is required".)

Closing

Applicants believe that the foregoing constitutes a bona fide response to all outstanding objections and rejections.

Applicants also believe that this application is in condition for allowance. However, should any issue(s) of a minor nature remain, the Examiner is respectfully requested to telephone the undersigned at telephone number (212) 808-0700 so that the issue(s) might be promptly resolved.

Respectfully submitted,

NORRIS MC LAUGHLIN & MARCUS, P.A.

By Howard C. Lee
Howard C. Lee
Reg. No. 48,104

HCL:vif

Attachment: Definition of emulsion from *Hawley's Condensed Chemical Dictionary*

220 East 42nd Street
30th Floor

New York, New York 10017
(212) 808-0700

CERTIFICATE OF MAILING

I hereby certify that the foregoing Amendment Under 37 CFR § 1.116 (After final response) is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Hon. Commissioner of Patents, Washington, D.C. 20231, on the date indicated below:

Date: **26 February 2002**

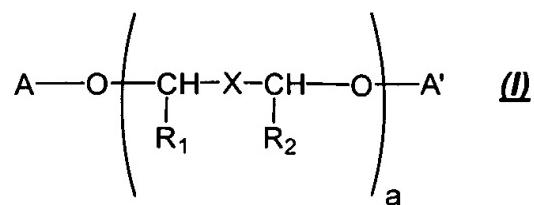
By Howard C. Lee
Howard C. Lee

COPY OF CLAIMS SHOWING AMENDMENTS MADE

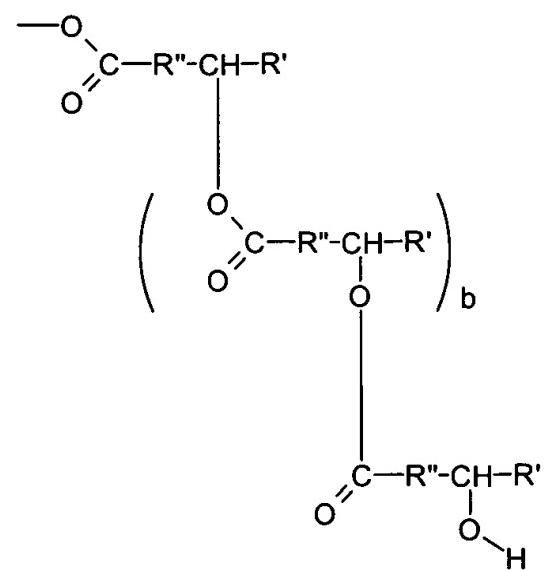
1. A water-in-oil emulsion

- (a) with a content of water and optionally water-soluble substances totalling at least 80% by weight, and with a content of lipids, emulsifiers and lipophilic constituents of less than 20% **by weight**, in each case based on the total weight of the preparations,

- (b) comprising at least one surface-active substance selected from the group consisting of substances of the general formula (I)

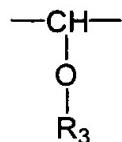


- where A and A' are identical or different organic radicals selected from the group consisting of branched and unbranched, saturated and unsaturated alkyl and acyl radicals and hydroxyacyl radicals having 10 - 30 carbon atoms, and the group consisting of hydroxyacyl groups bonded together via ester functions, according to the scheme



where R' is selected from the group consisting of branched and unbranched alkyl groups having 1 to 20 carbon atoms, and R["] is selected from the group consisting of branched and unbranched alkylene groups having 1 to 20 carbon atoms, and b is a number from 0 to 200,

- a is a number from 1 to 100,
- X is a single bond or the group



- R₁ and R₂ independently of one another are selected from the group consisting of H and methyl,
- R₃ is selected from the group consisting of H, and of branched and unbranched, saturated and unsaturated alkyl- and acyl radicals having 1 - 20 carbon atoms,

- (c) additionally comprising at least one cationic polymer, wherein said at least one cationic polymer is selected from the group consisting of cationic cellulose derivatives, cationic starch, copolymers of diallylammonium salts and acrylamides, quaternized vinylpyrrolidone/ vinylimidazole polymers, condensation products of polyglycols and amines, quaternized collagen polypeptides, quaternized wheat polypeptides, polyethyleneimine, cationic silicone polymers, copolymers of adipic acid with dimethylaminohydroxypropyldiethylenetriamine, copolymers of acrylic acid with dimethyldiallylammonium chloride, polyaminopolyamides, and cationic guar gum.

*Hawley's
Condensed Chemical
Dictionary*

ELEVENTH EDITION

Revised by

N. Irving Sax
and
Richard J. Lewis, Sr.



VAN NOSTRAND REINHOLD
New York

Copyright © 1987 by Van Nostrand Reinhold

Library of Congress Catalog Card Number 86-23333
ISBN 0-442-28097-1

All rights reserved. Certain portions of this work copyright © 1930, 1920, 1919 by The Chemical Catalog Co., Inc. and 1981, 1977, 1971, 1966, 1956, 1950 by Van Nostrand Reinhold. No part of this work covered by the copyright hereon may be reproduced or used in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or information storage and retrieval systems—with permission of the publisher.

Printed in the United States of America

Van Nostrand Reinhold
115 Fifth Avenue
New York, New York 10003

Chapman & Hall
2-6 Boundary Row
London SE1 8HN, England

Thomas Nelson Australia
102 Dodds Street
South Melbourne, Victoria 3205, Australia

Nelson Canada
1120 Birchmount Road
Scarborough, Ontario M1K 5G4, Canada

15 14 13 12 11 10 9 8 7 6 5

Library of Congress Cataloging-in-Publication Data

Condensed chemical dictionary.
Hawley's condensed chemical dictionary.

Rev. ed. of: The Condensed chemical dictionary.
10th ed./rev. by Gessner G. Hawley, 1981.
I. Chemistry—Dictionaries. I. Hawley, Gessner
Goodrich, 1905- II. Sax, N. Irving (Newton Irving)
III. Lewis, Richard J., Sr. IV. Title.
QD5.C5 1987 540'.3'21 86-23333
ISBN 0-442-28097-1

tion by an external energy source. When atoms or molecules are excited by energy input from an arc, spark, or flame, they respond in a characteristic manner; their identity and composition are signaled by the wavelengths of incident light they emit. The spectra of elements are in the form of lines of distinctive color, such as the yellow sodium D line of sodium, those of molecules are groups of lines called bands. The number of lines present in an emission spectrum depends on the number and position of the outermost electrons and the degree of excitation of the atoms. The first application of emission spectra was identification of sodium in the solar spectrum (1814).

See also spectroscopy.

emmenagogue. A drug used to induce menstruation.

Emmert reaction. Formation of 2-pyridylalkylcarbinols by condensation of ketones with pyridine or its homologs in the presence of aluminum or magnesium amalgam.

emodin. (frangula emodin; frangulic acid; 1,3,8-trihydroxy-6-methylantraquinone).

CAS: 518-82-1. $C_{14}H_8O_2(OH)_3CH_3$.

Occurs either free or combined with a sugar in a glucoside, in rhubarb, cascara sagrada, and other plants. A synthetic product is also available.

Properties: Orange crystals, mp 256C, soluble in alcohol, insoluble in water.

Use: Medicine (cathartic).

"Emolein."²⁴² TM for synthetic lubricant esters. Use: Compounding of synthetic jet engine lubricants to meet both military and civilian specifications. They include diisooctyl azelate, di-2-ethylhexyl azelate, dipropylene glycol dipelargonate, isodecyl pelargonate.

empirical formula. See formula, chemical.

"Empol."²⁴² TM for dimer acids, 36-carbon aliphatic dibasic acids.

Use: Modifiers of synthetic polymers, soaps, corrosive inhibitors, etc. Six grades available.

"Emralon."²⁴⁶ TM for series of resin-bonded, tetrafluoroethylene solid film lubricants. Colloidal TFE resin is dispersed in phenolic resin, acrylic resin latex, epoxy resin, or thermoplastic resin solutions.

Properties: Flash p varies from 4.4 to 14.4C.

Hazard: Flammable, dangerous fire hazard.

"Emsal."²⁴² TM for sulfated fatty alcohols.

"Emsorb."²⁴² TM for sorbitan and ethoxylated sorbitan esters.

"Emtall."²⁴² TM for a series of fractionated tall-oil fatty acids and distilled tall oils.

EMTS. Abbreviation for ethylmercury-p-toluenesulfonanilide.

"Emulphogene BC."³⁰⁷ TM for a series of tridecyloxopoly(ethyleneoxy)ethanols.

"Emulphor."³⁰⁷ TM for a series of nonionic emulsifying agents and dispersants. Some are polyoxyethylated vegetable oils, alcohols, and fatty acids.

emulsifier. A surface-active agent.

See emulsion.

emulsifying oil. See soluble oil.

emulsion. (synaptase; amygdalase; β -glucosidase). An enzyme catalyzing the production of glucose from β -glucosides.

Properties: White powder, odorless and tasteless, capable of hydrolyzing glucosides such as amygdalin to glucose and the other component substances. Soluble in water, insoluble in ether and alcohol.

Source: Sweet almonds.

Derivation: By extracting an emulsion of almonds with ether filtering the clear solution and precipitating the emulsion with alcohol.

emulsion. A stable mixture of two or more immiscible liquids held in suspension by small percentages of substances called emulsifiers. These are of two types: (1) Proteins or carbohydrate polymers which act by coating the surfaces of the dispersed fat or oil particles thus preventing them from coalescing; these are sometimes called protective colloids. (2) Long-chain alcohols and fatty acids which are able to reduce the surface tension at the interface of the suspended particles because of the solubility properties of their molecules. Soaps behave in this manner; they exert cleaning action by emulsifying the oily components of soils. All such substances, both natural and synthetic, are known collectively as detergents.

Polymerization reactions are often carried out in emulsion form; a wide variety of food and industrial products are emulsions of one kind or another, e.g., floor and glass waxes, drugs, paints, shortenings, textile and leather dressings, etc.

All emulsions are comprised of a continuous phase and a disperse phase; in an oil-in-water (o/w) emulsion, such as milk, water is the continuous phase and buttersfat (oil) the disperse phase; in a water-in-oil (w/o) emulsion, such as butter, free fat (from crushed fat globules) is the continuous phase and unbroken fat globules plus water droplets are the disperse phase.